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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/013,541	01/26/1998	JOHAN P.M.G. LINNARTZ	PHN16210	3468

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EXAMINER

DAVIS, ZACHARY A

ART UNIT	PAPER NUMBER
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2137

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/013,541	Applicant(s) LINNARTZ, JOHAN P.M.G.	
	Examiner Zachary A Davis	Art Unit 2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 35, 38, 43-47, 49-52, 54, and 56-57 is/are allowed.
- 6) ☒ Claim(s) 1-34, 36-37, 39-42, 48, and 55 is/are rejected.
- 7) ☒ Claim(s) 53 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A Request for Continued Examination was received on 24 August 2004. Claims 18, 26, 28, 30, 32, 35, 38, and 41 have been amended. New claims 43-57 have been added. No claims have been canceled. Claims 1-57 are pending in the present application.

Response to Arguments

2. Applicant's arguments filed 24 August 2004 have been fully considered but they are not persuasive.

3. With respect to the rejection under 35 U.S.C. 101 of claims 9, 10, 16, 30, and 31, Applicant asserts that the claims do recite statutory subject matter. The Examiner respectfully disagrees. The Applicant states that "It is not necessary to force implementation by a computer, it is only required that the contents of the information carrier can be used by a computer." However, the Examiner respectfully draws Applicant's attention to MPEP § 2106 IV. B. 1(b), which states "Where certain types of descriptive material, such as music, literature, art, photographs and mere arrangements or compilations of facts or data, are merely stored so as to be read or outputted by a computer *without creating any functional interrelationship*, either as part of the stored data or as part of the computing processes performed by the computer, then *such descriptive material alone does not impart functionality either to the data as so*

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structured, or to the computer" [emphasis added]. The Examiner believes that there is no functional or structural interrelationship between the data and other aspects of the claimed invention. Although there is a predefined relationship between the first and second bitpatterns, changing one of the stored bitpatterns does not affect the other stored bitpattern. The Examiner also believes that the claimed material does not support data manipulation functions. Therefore, the claims are directed to non-statutory material, and the rejection under 35 U.S.C. 101 is proper.

The Examiner further draws Applicant's attention to new Claims 47, 48, 54, and 55. Claims 48 and 55 are also rejected below under 35 U.S.C. 101 by a similar rationale as that applied to, for example, Claims 9 and 30 above. However, Claims 47 and 54 are directed to statutory subject matter. Specifically, the claims are directed to functional descriptive material as defined in MPEP § 2106 IV. B. 1(a). A functional and structural interrelationship is formed between the data and the other aspects of the claimed invention because the medium mark is contained in a wobble of a track of the information carrier.

4. With respect to the rejection under 35 U.S.C. 103(a) of claims 1-34, 36-37, and 39-42, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

More specifically, Applicant states that the rejection under 35 U.S.C. 103(a) of the listed claims as being unpatentable over Oshima et al, US Patent 5761301, in view of Moskowitz, US Patent 6205249, and Bahns et al, US Patent 5607188, does not address the subject matter defined by a medium mark comprising a first bitpattern and an embedded watermark comprising a second bitpattern, where the first and second bitpatterns have a predefined relationship. The Examiner respectfully disagrees. The combination of Oshima, Moskowitz, and Bahns must be taken as a whole. Oshima et al discloses a medium mark used to form a digital signature. This digital signature corresponds to Applicant's claimed second bitpattern. Bahns et al teach that identifying and authenticating information can be used as a mark on an optical disc. This information can be embedded as a pattern that may or may not be readable when reading the data of the disc (for example, column 4, lines 51-55, where the mark may be applied in a data-carrying region of the disc). Therefore, when embedded in the medium mark of Oshima et al, the content of this identifying mark reads on Applicant's claimed first bitpattern. Since the second bitpattern, the digital signature, is formed from the medium mark, the content of which is the first bitpattern, the Examiner believes that there is indeed a predefined relationship between the first and second bitpatterns. Further, Moskowitz teaches embedding a signature, for example, that of Applicant's second bitpattern or Oshima et al's digital signature, to be used as a watermark. Therefore, the Examiner maintains the rejection set forth below.

Claim Rejections - 35 USC § 112

5. The rejections to claims 26-34, 36-37, and 39-42 under 35 U.S.C. 112, second paragraph, are withdrawn in light of Applicant's amendments to the claims.

6. Regarding Claim 25, the Examiner respectfully wishes to clarify the rejection under 35 U.S.C. 112, second paragraph, as being indefinite. The previous Office Action stated that there is insufficient antecedent basis for the limitation "the encoder means" in lines 2-3 of the claim. This was due to the discrepancy between the limitation "the encoder means" and the limitation "encoding means" recited in line 2 of the claim.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 9, 10, 16, 30, 31, 48, and 55 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are directed to an information carrier including a medium mark and other recorded information, which is non-functional descriptive material, because there is no functional interrelationship between the stored data and the information carrier itself, nor is there an interrelationship between the stored data and any other aspect of the claimed invention.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-34, 36-37, and 39-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshima et al, US Patent 5761301, in view of Moskowitz, US Patent 6205249, and Bahns et al, US Patent 5607188.

In their abstract, Oshima et al. disclose a medium mark on an optical disc. See pad 819b of figure 1 for reading a medium mark from the record carrier. The position information is sent to an encryptor that creates a digital signature of the position information, as described in the abstract. The digital signature reads on applicant's second bitpattern. Figure 18 shows the entire process of forming the digital signature and then verifying it.

Oshima et al. do not say that the digital signature is embedded as a watermark in user information or that applicant's first bitpattern is stored as contents of the medium mark. In lines 44-57 of column 6, Moskowitz presents embedding digital signatures into content as watermarks. Content is user information in that it is used by the user. This embedding provides non-repudiation and validation. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to

embed the signatures described in Oshima et al. as watermarks into the user information in order to assure non-repudiation and validity.

In their abstract, Bahns et al. teach watermarking an optical disc with a name, logo, design, picture, or other pattern that is applied within the structure of a disc. Figure 1 shows an example, with element 20 serving as a watermark for disc 10. This watermark, which is different than the digital watermarks disclosed by Moskowitz, identifies as well as authenticates the disc. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Bahns et al.'s watermark as the medium mark in Oshima et al. so that the medium mark not only authenticates but also identifies the medium.

Figure 18 of Oshima et al. anticipates the limitations specific to claims 2 and 3. Claim 4 is obvious because signing keys are (supposed to be) unique to devices and the software maker is disclosed as including both the embedding apparatus and the signature generator. Claim 5 contains limitations already discussed in claim 1. Element 819a of Oshima et al.'s first figure meets the first clause of claim 6. Data used to interpret the mark into the first bitpattern reads on applicant's seed and thus the second clause of claim 6 and claim 7.

Moskowitz and Oshima et al. have both taught the benefit of creating digital signatures as a way to secure information. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a cryptographic one-way function to create the first bitpattern, thereby meeting the limitations of claim 8.

The output disc of Oshima et al., when modified by the teachings of Moskowitz, contains the elements of claim 9. Claim 10 is obvious in view of Moskowitz's teaching of a digital signature being used to verify data. As such, it would be obvious to identify the content being watermarked. Claim 11 is covered by the above discussion of claim 1 and figure 18 in Oshima et al. Figure 18 also foresees claim 12. Claim 13 is covered by Moskowitz's discussion of secure hash functions. The limitations of claim 14 are rendered obvious by Moskowitz's discussion of digital signatures.

With respect to claim 15, the recorder has already been shown to possess means for reading the first bit pattern from the record carrier. The presence of this bitpattern in itself indicates a copy protection status that the content is copy protected. The rest of the elements of claim 15 have been discussed above. The content of claims 16 and 17 has already been discussed. Claim 18 is rendered obvious by the abstract of Bahns et al., which teaches watermarking the optical disc at production. This feature also meets the limitations of claim 19. The "OK?" with two exiting paths in figure 18 of Oshima et al. anticipates a switch and thus claims 20 and 21. Claims 22-34 consist of limitations that have been treated by claims 1-13, respectively. Claim 36 is obvious for the same reasons as the last two clauses of claim 1. Regarding Claim 37, Oshima et al. teach that watermarked information (information combined with a digital signature) is encrypted before being recorded, at lines 38-47 of column 3. Art applied to the second clause of claim 1 shows the limitations of claim 39. Oshima et al. render obvious claim 40. The elements of claims 41 and 42 are obvious for the same reasons as those of claims 11 and 15.

Allowable Subject Matter

11. Claims 35, 38, 43-47, 49-52, 54, and 56-57 are allowed.

A statement of reasons for the indication of allowable subject matter with respect to Claims 35 and 38 appears in the previous Office Action dated 24 March 2004.

Claims 43-47, 49-52, 54, and 56-57 are allowed by a similar rationale.

12. Claim 53 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 52. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Davis et al, US Patent 5809006, discloses an optical disc with copy protection that includes a track having a radial wobble.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary A Davis whose telephone number is (571) 272-

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3870. The examiner can normally be reached on weekdays 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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